BRIEF DESCRIPTION OF DRAWINGS

[0027] Figure 1 illustrates a classification tree for white flour.

[0028] Figure 2 illustrates a classification tree with parameter-values for white flour.

[0029] Figure 3 illustrates a classification tree with parameter-value descriptions and lengths to generate a compact item descriptor.

[0030] Figure 4 illustrates the part number structure for a Kemet ceramic capacitor

Table 1 illustrates the Classification SQL Table for the classification tree of Figure 3.

Table 2 illustrates the Parameter SQL Table for the parameters of Figure 3.

Table 4 illustrates the Item Catalog as an SQL table where the supplier, supplier part number, compact item descriptor, and commodity codes are organized for queries that relate these fields including distinct items that are interchangeable and have the same compact item descriptor.

Table 5 illustrates the Supplier P/N Alias Table as an SQL table that relates alias part numbers for an item where a query with the alias part number returns the item with the compact descriptor.

Table 6 illustrates the Supplier Suffix Table as an SQL table that relates a supplier and manufacturing process requirements with the modification of the part number for an item that meets the manufacturing process requirements.

[0023] The objective of a classification of items for a catalog is to identify interchangeable items for the expected use. The selection of parameters is important as well as the grouping of parameters to organize the items for a systematic and "natural" search for match, the set of interchangeable items. Classification can be thought of as a tree with a parameter at each fork with different values for each branch. A classification tree for the Acme is illustrated in Figure 1. The first fork 1 is from the base of the tree where the parameter "type of flour" forms the branches. There are three branches: white flour 2, whole-wheat flour 4, and whole-grain flour 3. The white flour 2 branch has a parameter for bag weight 5 with three branches: 10-pounds 6, 50-pounds 7, and 100-pounds 8. The terminus of each branch, a leaf, is an item that can be ordered from Acme and is assigned an Acme part number. An Acme customer can find the part number for 100-pound bags of white flour from the catalog by first selecting the white flour 2 branch and then selecting the 100-pound bag 8 branch. The 100-pound bag 8 is a leaf and the catalog provides the Acme part number for ordering a 100-pound bag of white flour. From the classification tree, the Acme customer also can see that Acme sells whole-wheat flour and whole-grain flour and can follow these branches and by selecting values for parameters at forks (which are not illustrated) to determine the part number of these other flour types.

[0024] The Acme catalog can be organized with a smaller number of forks and branches by assigning a lower order branch as a leaf and defining the remaining parameters as values. In the white flour example, a different classification tree can be defined as illustrated in Figure 2. The first fork 9 of the classification tree has three branches: white flour 10, whole-wheat flour 11, and whole-grain flour 12. The white flour branch is a leaf with one parameter: bag weight 13. Bag weight 14 is permitted three values: 10-pound, 50-pound, and 100-pound. When the parameter is selected, the part number for the classified item with the specific parameter is provided. Classification with parameters is useful when the number of permitted values is large or when values for two parameters interact and may be difficult to express as a tree. As an example, a resistor is an electronic item that is manufactured from many different materials and in many shapes. A resistor can be manufactured to provide a specific resistance value within a range of values. The range may provide several thousand different values. Creating a classification tree branch for each value may make the catalog cumbersome for users. Resistance may be best represented as a parameter with a range of values. Many resistor manufacturers generate